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EXAMINER	
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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ESA MALKAMAKI and FRANK FREDERIKSEN

Appeal 2009-005507
Application 10/732,745
Technology Center 2100

Before MAHSHID D. SAADAT, THOMAS S. HAHN, and
ELENI MANTIS MERCADER, *Administrative Patent Judges.*

SAADAT, *Administrative Patent Judge.*

DECISION ON APPEAL[1]

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[1] The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the "MAIL DATE" (paper delivery mode) or the "NOTIFICATION DATE" (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 1 through 30, which constitute all the pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

STATEMENT OF THE CASE

Appellants' invention relates to methods, terminal devices, and network devices applicable to mobile telecommunications for providing redundancy parameters for automatic repeat request processing at a terminal device. Claims 1 and 3, which are illustrative of the invention, read as follows:

> 1. A method, comprising:
>
> providing a set of predetermined sequences of redundancy parameters;
>
> selecting at least one of said set of predetermined sequences; and
>
> transmitting information indicating the selected at least one sequence to a terminal device to provide said redundancy parameters for an automatic repeat request processing at said terminal device.
>
> 3. The method according to claim 1, wherein said transmitting of said information is performed by using a higher layer signaling.

The Examiner relies on the following prior art in rejecting the claims:

Laroia US 2004/0228320 A1 Nov. 18, 2004
Appellants' Admitted Prior Art (AAPA) (Spec. ¶¶ [0003]-[0004]).

Claims 1, 2, 7-17, 21-23, and 25-30 stand rejected under 35 U.S.C. § 102(e) as anticipated by Laroia.

Claims 3-6, 18-20, and 24 stand rejected as unpatentable under 35 U.S.C. § 103(a) as obvious over Laroia in view of AAPA.

We make reference to the Briefs (Appeal Brief filed Jan. 22, 2008, and Reply Brief filed June 5, 2008) and the Answer (mailed Apr. 15, 2008) for their respective details. Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants did not make in the Briefs have not been considered and are deemed waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

ISSUES

Claims 1, 16, 23, 28, 29, and 30 are independent claims. Appellants have separately argued patentability of each claim (App. Br. 12). However, the arguments presented for claims 2, 7-17, 21-23, and 25-30 either directly adopt the arguments made for claim 1 or are presented in modified (App. Br. 16-23)[2] or supplemented (Reply Br. 11-12) form from that presented for claim 1, but without a difference in the substance of the argument. Similarly, patentability of claims 4-6, 18-20, and 24 is asserted as being based on the same arguments made for claim 3 (App. Br. 25-28).

Accordingly, while all of the arguments for all of the claims have been fully considered and taken into account, the arguments made for the patentability of claims 1 and 3 are representative of the arguments made for the remainder of the claims. Therefore, the issues are:

[2] No argument was presented for claim 21; it is presumed that paragraph 18 at page 21 of the Appeal Brief was intended to address claim 21 rather than claim 23.

1. Is claim 1 unpatentable as anticipated under 35 U.S.C. § 102(e) by Laroia?

2. Is claim 3 unpatentable as obvious under 35 U.S.C. § 103(a) over Laroia in view of AAPA?

FINDINGS OF FACT (FF)

Laroia

1. Laroia is directed to a wireless communications system including a plurality of cells representing the wireless coverage area; each cell includes a base station (BS) coupled to a plurality of end nodes referred to as wireless terminals (WT) (*see* Fig. 1; ¶¶ [0036]-[0037]).

2. Laroia discloses using incremental redundant codes in data transmission as shown in Figure 5, reproduced below:

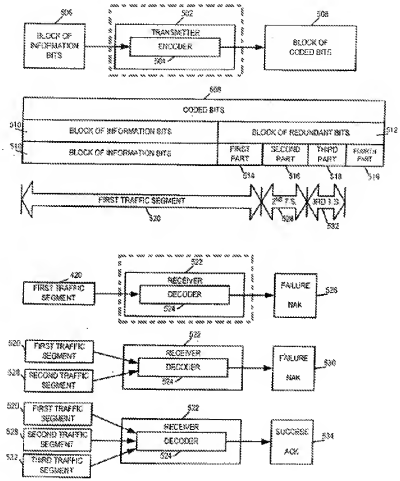

Figure 5 shows a receiver 522 including a decoder 524 and a transmitter 502 including an encoder 504.

3. Laroia uses a big parity check matrix to generate coded bits 508 which include a block of information bits 510 and a block of redundant bits 512 (¶ [0078]).

4. Laroia divides the block of redundant bits 512 into four parts 514, 516, 518, and 519 and transmits the first part 514 with the information bits 510 in the first traffic segment 520, while the remaining parity check bits in the second through fourth parts 516, 518, and 519 are stored to be used in the event of a negative acknowledgment (NAK) (*id.*).

5. Laroia discloses that if the receiver 522 is unable to decode the information bits 510, it sends a NAK 526. In response, the transmitter 502 sends the second part of the parity check bits 516 in a second traffic segment 528 (*id.*).

6. If the receiver 522 fails to decode the information bits 510 and receipt of the second NAK 530, the transmitter 502 transmits the third part of the parity check bits 518 in a third traffic segment 532 (*id.*).

7. The receiver uses some or all of the received segments to decode the information bits 510. Upon successful decoding, the transmitter may discard the unused parity check bits (*id.*).

8. After successful decoding of the block of information bits, the receiving device 522 transmits a positive acknowledgement signal (ACK) to the transmitting device, which causes the transmitter to cease sending additional redundant bits (¶ [0079]).

9. Laroia discloses that a multilevel-NAK transmitted by the receiver to the transmitter indicates the required amount of redundant information (¶ [0101]).

10. Based on the feedback information from the multi-level NAK, the transmitter can adaptively determine the number of effective incremental redundant bits to be included in the traffic segment in order to adjust the amount of resources allocated to the traffic segment (*see* ¶¶ [0101]-[0103]).

AAPA

11. AAPA discloses that the use of multiple layers of signaling and the selection of higher layers for various signaling functions resulted in reducing the retransmission delay and was known to persons having

ordinary skill in the art at the time the invention was made (Spec. ¶¶ [0003]-[0004]).

PRINCIPLES OF LAW

> Section 103 forbids issuance of a patent when "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."

KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007).

"If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability." *Id.* at 417. "A person of ordinary skill is also a person of ordinary creativity, not an automaton." *Id.* at 421.

ANALYSIS

1. Claim 1

The Examiner has read every element of claim 1 on a corresponding portion of Laroia's disclosure (Ans. 3, 10-11). Appellants have responded that Laroia does not disclose the selection of at least one of a set of predetermined sequences of redundancy parameters, and argue that Laroia's successive transmission of redundancy parameters is merely an automatic repeat request by providing a large block of parity check bits 512 until reaching a successful decoding (App. Br. 14-16; Reply Br. 5-6).

We agree with the Examiner that all of the limitations of claim 1 read on the disclosure of Laroia. We initially note that Laroia describes communication between the receivers and transmitters included in the BS and the WT within a communications system (FF 1). In particular, we find

that "providing a set of predetermined sequences of redundancy parameters" reads on Laroia's block of redundant bits 512 divided into four parts (FF 2-4). We find that "selecting at least one of said set of predetermined sequences" reads on Laroia's selection of the redundant bit to be transmitted with the information bit subsequent traffic segments in response to NAK and ACK signals generated by the receiver 522 (FF 4-8). We also find that the limitation of "transmitting information indicating the selected at least one sequence to a terminal device to provide said redundancy parameters for an automatic repeat request processing at said terminal device" reads on the transmission of Laroia's NAK and ACK signals to the transmitter (FF 5-8).

Contrary to Appellants' assertion (App. Br. 14-16; Reply Br. 5-6) that Laroia transmits a sequence of redundancy parameters instead of selecting one of the set of predetermined sequences, we find nothing in the claim that would exclude such a selection being performed sequentially in contrast to a single selection. Nevertheless, Laroia also discloses a multi-level NAK which performs non-sequential selection of one, two, or three parts of the block of redundancy bits (FF 9-10).

Appellants further argue that the selection of a predetermined sequence of redundancy parameters "[enables] a network operator ... to select redundancy version strategies to be used by the terminal device" (App. Br. 14; Reply Br. 5-7), and that in Laroia "there is simply no selection, or choose [sic], between different predetermined sequences of redundancy parameters as recited in claim 1 . . . " (Reply Br. 7). As the Examiner points out (Ans. 10), the limitation of enabling a network operator to select redundancy version strategies does not appear in claim 1. Similarly, claim 1 is devoid of any reference to "different" predetermined sequences.

Accordingly, we conclude that the Examiner properly rejected claim 1, as well as claims 2, 7-17, 21-23, and 25-30 which fall with claim 1, as anticipated by Laroia.

2. *Claim 3*

The Examiner has rejected claim 3 as being obvious over Laroia in view of AAPA (Ans. 7-9). Appellants respond that AAPA does not remedy any of the deficiencies in Laroia (App. Br. 23-25), and that AAPA is not admitted prior art but merely an alternative solution that was found to be problematic (App. Br. 24-25).

With respect to Appellants' contention that the material disclosed in AAPA is not admitted prior art, we find it unpersuasive at least as to the teaching of multi-layer signaling (FF 11). In that regard, while erroneous data reception may introduce delays, AAPA does recognize that transmission at other layers reduces retransmission delays and enhances uplink data capacity (*see* Spec. ¶ [0003]).

With regard to the deficiencies of Laroia related to claim 3, we find, consistent with our findings regarding claim 1 *supra*, that the only deficiencies the Examiner identified in Laroia with regard to claim 3 are the limitations stated in dependent claim 3, i.e., "said transmitting of said information is performed by using a higher layer signaling," for which the Examiner relied on AAPA. As correctly pointed out by the Examiner (Ans. 12), Appellants do not contend that the AAPA lacks this limitation. In fact, applying the configuration described in AAPA provides a further improvement to the method disclosed in Laroia. We find that a person having ordinary skill in the art at the time the invention was made would consider using higher layer signaling as disclosed in the AAPA (FF 11) to

transmit the NAK and ACK signals for sequence selection, using ordinary creativity and judgment as to do so is a predictable variation, *KSR*, 550 U.S. at 417, 421.

Accordingly, we conclude that the Examiner properly rejected claim 3, as well as claims 4-6, 18-20, and 24 which fall with claim 3, as obvious over Laroia in view of AAPA.

CONCLUSIONS

On the record before us and in view of the analysis above, we find that claims 1, 2, 7-17, 21-23, and 25-30 were properly rejected under 35 U.S.C. § 102(e) as anticipated by Laroia and claims 3-6, 18-20, and 24 were properly rejected under 35 U.S.C. § 103(a) as obvious over Laroia in view of AAPA.

ORDER

The decision of the Examiner rejecting claims 1-30 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

babc

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